RECORD, Volume 28, No. 3*

Boston Annual Meeting
October 27–30, 2002

Session 82PD
Managing an In-Force Block of Long-Term Care Insurance Business

Track: Long-Term Care

Moderator: DARRELL D. SPELL
Panelists: SUSAN ELLIOTT
MARK S. DINSMORE
SCOTT WELTZ

Summary: Managing an in-force block of long-term-care insurance (LTCI) policies requires attention to maintain value to policyholders and persistency of healthy lives. Panelists discuss the following:

- *Comparison of emerging experience to expected*
- *Managing new product development with an in-force block*
- *Allocating and controlling expenses between multiple product generations*

MR. DARRELL D. SPELL: Good morning. We have three excellent speakers today. First is Sue Elliott. She's a senior consultant with Watson Wyatt in the U.K. Next will be Scott Weltz from the Milliman USA Milwaukee office. Finally, there's Mark Dinsmore, chief operating officer for LTC Global Solutions.

MS. SUSAN ELLIOTT: Good morning, everybody. You might find it a bit odd to see a Canadian talking about the U.K. in the United States. I have worked in all three markets for quite some time, so I know a bit about long-term care.

The long-term care market is in its infancy in the U.K.. It started in the early 1990s, but has not taken off, despite the clear need for the product. Currently, there are only three major providers in the U.K. long-term-care market. It's lagging

*Copyright © 2003, Society of Actuaries

somewhat behind the developments in the United States. Currently, there are about 35,000 policies in force, which is not very many at all.

I'd like to focus on three points today, starting with some background on the U.K. market and the current issues that it's facing. Then I'll spend the rest of the presentation focusing on the risk management issues with respect to long-term care in the U.K..

Long-term care is a concept rather than one single product. It includes a range of products designed to contribute toward the cost of long-term care. It starts with the immediate-care annuity, which is for people who actually need care right now. Currently, that's where the bulk of the sales are in the U.K.

Now, I will move to the traditional pre-funded long-term-care insurance. In the U.K., it's split into two products. There's a traditional insurance product and the investment bond, which takes the care charges out of the fund for long-term care. There are also some current issues with respect to the bonds.

It's been introduced as another condition on critical illness policies and has been affiliated with income protection, which, in North American terms, is disability income. This makes it lifetime income protection. So, at retirement age, the definition of disability will switch from occupationally-based to activities of daily living (ADL), or cognitive impairment-based. That has not been successfully developed in the U.K., although a lot of companies have talked about it as a way to extend the market.

Regarding results of roles for equity release and pensions, although they have not been very successful, equity release had some very bad PR back in the early 1980s due to misselling, just as pensions have had. Currently, long-term care is not allowed to be linked to pensions as per Inland Revenue, which is the taxation authority in the U.K.. However, it's not stopping us from lobbying with the government to try to get the natural link to deal with retirement needs. Some companies offer it as a rider on their pension to get around it.

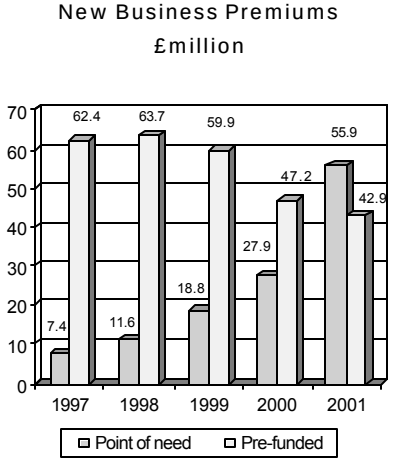
As stated earlier, the sales have been quite disappointing in long-term care. The Association of British Insurers (ABI) collects sales stats on a regular basis by product line. For long-term care, looking at regular premium business, meaning annual as opposed to a single premium,. back in 1996, sales had about £2.9 million of new business premium. Now, they are averaging £2 million in sales per annum, which is not significant.

Single premium business gets into double digits. The key thing to note in Figure 1 is how the point of need versus the pre-funded premium has shifted. Back in 1997 there was only £7.4 million in immediate needs, and that has grown to just under £56 million. The pre-funded premium went down from £63 million in 1997 to just under £43 billion in 2001. So, sales have shifted around.

Figure 1

Background

Long-term care: single premium business



- From 2000, the ABI split pre-funded data between LTC bonds and LTC insurances
  - 78% of premiums from Bonds in 2000
  - 63% of premiums from Bonds in 2001
- Total single premium sales peaked in 1996 with 4,600 policies (only 100 point of need cases)
- Premiums and case size peaked in 2001
  - driven primarily by point of need sales (1300 cases worth £56 million)

5 Source: ABI

The ABI also started to collect information on the amount of business that's sold as an investment bond, which is about 63 percent of the business right now. There's one main provider who does the investment bond. Later on I'll go into why the sales haven't been great.

All the mergers and acquisitions bring it down to four or five players (Figure 2). The first company into the market was Eagle Star, with immediate annuity in early 1991. Now it's no longer in the market. Hambro Assured is no longer in the market. Commercial Union has merged with Norwich Union and they're now CGNU, which is now Aviva, and is one of the largest providers.

Figure 2

Background

Providers

• Eagle Star	March 1991	Immediate annuity
• Hambro Assured	April 1991	Pre-funded
• Commercial Union	June 1991	Pre-funded
• Prime Health	1991	Pre-funded
• PPP	January 1992	Pre-funded
• Commercial Union	June 1992	Immediate annuity
• PPP	August 1994	Immediate annuity
• Scottish Amicable	September 1994	Bond
• BUPA	April 1996	Pre-funded
• PPP	July 1996	Pre-funded (Revamped)
• PPP	September 1996	Bond
• Irish Life International (PPP)	September 1996	Bond
• Permanent	March 1997	Pre-funded
• Royal Skandia	April 1997	Bond
• Norwich Union	November 1997	Pre-funded & annuity

6

Prime Health is no longer there. PPP is the largest provider, and now goes by the name Access and Life. Another big one to note is Scottish Amicable European, which goes by the name Prudential European now. A major health-care provider in the U.K. market is Bupa.

So, Commercial Union, PPP, Bupa and Prudential are the largest providers and they all offer immediate annuities and pre-funded premiums. There was a lot of activity in the 1990s with companies entering into the market, but not a great deal of success.

Here are the key events in the long-term-care history in the U.K., with respect to what the government's been doing or not doing. In May 1996, the Conservative government introduced the paper, "A New Partnership for Care in Old Age." It looked at two potential solutions that were modeled after the U.S. experience. The first was a time-based solution and the second was a pound-per-pound solution. They were generally very receptive and the concepts were considered to be very good; the paper didn't go far enough, so it was shelved.

A couple of other events in 1996 again focused on the funding. Then, the new Labor government came in with Tony Blair in May 1997. By the end of that year, he'd established the Royal Commission on Long-Term Care for the Elderly. Our Royal Commission is designed to investigate how things can be done. I'm going to further explore this last item in the next couple of slides.

The Royal Commission was formed because government actually acknowledged that there was a problem (Figure 3). Demographic changes were potentially going to lead to a huge increase in demand for long-term care, both with respect to number and actual funding. A model projected that the number of people needing care would increase from 6.5 million in 1995 to just under nine million in 2031. That was the realistic scenario. Those numbers were£46 billion in 1995, and were projected to increase to £65 billion. In a pessimistic scenario, that number increased from £65 billion to £100 billion, so the numbers are huge and funding will be required both in the public and private sectors.

Figure 3

Background

Key events in history

- **May 1996 - "**A New Partnership for Care in Old Age" (The Conservative Government)
- **July 1996 - "**Long Term Care: Future Provision and Funding" (The Commons Health Select Committee)
- **September 1996 - "**Meeting the Cost of Continuing Care" (Joseph Rowntree Foundation)
- **May 1997 -** New Labour Government
- **December 1997 -** Establishment of "Royal Commission on Long Term Care for the Elderly"

7

There was also a concern about the shift from informal to formal care. As people moved around, families split up, so they didn't have the informal care providers as readily as before. Also, the state provision in the U.K. is a bit of a lottery. It depends on where one lives, who the local authorities are and what money they actually have to dish out for the elderly. Also, there is a lack of coordination between the assessment and delivery of long-term care. That needed to be addressed.

In terms of references, the Committee members were to examine the short- and long-term options for a sustainable system of funding long-term care for the elderly, both in their own homes and in nursing homes. Within 12 months they were to recommend how that was actually going to happen and how the cost of such care would be apportioned between public and private funds.

They did produce a report, so insurers expected to find a clear statement indicating what the public provision would be . That didn't happen, and there was not an

acceptance by government that insurance was a viable solution either. During discussions, the Institute of Actuaries accepted insurance as a solution, once they understood that we're not just out to get huge profits. This was an educational exercise.

They also wanted to know why females might have higher rates. They said everybody should have the same rates. They responded that the risks are different.

Regarding government acceptance of other funding mechanism potential and the encouragement of self-provision, there is the role of informal care, the integration of assessment techniques, and delivery of care. These last two are very important for the long-term-care market because it's not just about cash. It is about the care element as well.

Overall, what any government tries to do is fill the bottom part of that pyramid. The current products in the U.K. are at the very top of the pyramid and only the very wealthy can afford them. For those who are that wealthy, chances are they don't need the insurance. These people can fund for the care themselves. The government's desire was to fill the bottom part of that pyramid, which leaves the gap in the middle. They haven't been able to solve that problem yet.

The last major development for long-term care was in the late 1990s and nothing has really happened since then. It's stagnant with respect to sales and with respect to government activity.

Current issues are the same as those back in the early 1990s. Large sections of the population still think that the state is going to provide for them. They still believe in the cradle-to-grave mentality of the welfare state.

Long-term-care provision is low on the priority list. They think it's something that can be left alone. Products are perceived as expensive and a poor value for money; they are also seen as a difficult sale that can take two or three visits. This population is the elderly and thus more conservative and cautious in its approach.

Recent stock market performance has caused long-term-care bonds to have some difficulty. This is such that their fund projections are not materializing, so charge rates will have to go up—and quite significantly. Equity release has failed to be a good mechanism to actually let out some funds for the provision of long-term care.

Those are the current issues. It doesn't sound very positive, but we have to be realistic about what we're facing and how we're going to overcome these things.

Now I will focus on the risk management issues associated with long-term care, from a U.K. perspective. I realize that they will also apply to North America, but these are areas on which we've been focusing as an industry, and with the Institute of Actuaries.

From the risk management perspective, first I'd like to look at the health-care insurance risk, how it's defined and why it's different than traditional life insurance risk. Then I will look at the control cycle management, which is vital for the sound risk management of any product line—not just long-term care. Then I will focus on the four key areas—pricing, underwriting, claims management and experience monitoring.

Health-care insurance risk is much more complex than traditional life insurance risk. A multitude of internal and external risk factors contribute to the emerging experience. From an internal perspective, one looks at the individual company's risk appetite. What's its claims management philosophy? What's its underwriting philosophy? These answers will change over time and between companies. As for other health-care lines, the experience by company varies quite significantly.

From an external perspective, one must look at and predict what the government is going to do. What about the impact of medical advances? These days people live longer in a more disabled state. Which theory is going to prove true?

Also, there is the economy, which is not as big of a factor for long-term care. The economy factors in more for income protection or disability business.

A multidisciplinary approach is fundamental to the underlying profitability of the health-care product, and a consistent philosophy across all disciplines must be mirrored in the pricing assumptions. However, that hasn't always happened.

Any emerging trends must form the basis of future strategy across all disciplines. Most importantly, one has to ensure that appropriate controls are put in place to accurately monitor a business. This has affected the U.K. market with another product—income protection—and it has lost a lot of money due to a lack of monitoring.

The control cycle management tool is not new, it's not rocket science and it's quite a simple concept. It's a financial tool used by actuaries to manage the product cycle and it gives a framework for managing a product line. It also demonstrates the need to consider a wide range of issues on a holistic basis. All disciplines must work together, bearing in mind the impact that they have on each other. As actuaries, we haven't always done that. We may not have listened to or even talked with our claims managers. The same thing can apply with our chief underwriter, especially on the health-care lines where the medical aspects come into play. Also, there must be consistent standards across all disciplines.

If we start at the top with product design, in the U.K., the ABI has developed a statement of best practice for the claims trigger definitions. The ADLs have a consistent definition for all the providers, which helps consumer confidence and Inter-Financial Association (IFA) sales, and makes comparisons easier.

Even when we look at them now, we think they're in plain English, but they're so open to interpretation when the claims actually start coming in. One may think it is straightforward, but it's not.

I'll cover pricing in more detail later on. I had mentioned marketing and sales. This is a very specialized sale and a very time-consuming one. The actual marketers have put off selling it. Since they don't know what the government will do, they don't know how viable the product will be going forward. They don't know if it is sustainable or not and if they will have to do a sale with another product later on.

Then there's underwriting. It had been very conservative, initially. However, there are signs that it is weakening, especially with the bonds, which aren't really sold for long-term-care purposes. The underwriting is much more simplified, because agents don't like strict underwriting since it takes away from the investment sale.

Regarding claims management, there is already a definition drift. Claims are being paid that don't actually adhere to the definition. However, it's very difficult if they have to tell an elderly person he or she is not going to get paid out.

Finally, there is experience monitoring, which I'll mention a bit later. That all feeds into the pricing and valuation basis.

The data sources available for pricing long-term care in the U.K. are very limited. There are no real insured data, so we use a government population data source entitled, "The Prevalence of Disability Amongst Adults." It is actually a very good data source. It measures the severity of disability based on ADLs and covers cognitive impairment. It fits the claim conditions.

We also have to consider the class selection effect, which wouldn't be in the population data. This is any secular trends, and the impact of insurance with a propensity to claim an increase because people have insurance.

The insured data, as I mentioned, is very limited. The Institute of Actuaries tried to collect data to do an analysis like those done in the United States. Unfortunately, the top two providers didn't want to play, for competitive reasons. Some of their reasons are understandable, because the data origin would be very obvious from the experience. We've got the same thing in the private medical insurance (PMI) market in the U.K. because it's also dominated by two players.

The other thing to mention is that the long-term-care product is very heavily reinsured, up to 90 percent of the quota share. So a lot of direct writers rely on the reinsurer's risk rate to do their own pricing. Having said that and having worked at a reinsurer, I know that all the reinsurers in the U.K. use the same data source as a starting point, although the interpretation may be slightly different.

The other thing is the concept of long-term premium guarantees. How is that accounted for in the pricing? These are such early days in the product and putting in some of the longer guarantees is a bit scary. We are going through that right now in the U.K. for our critical illness product, in which the reinsurance has dried up, except for one major player.

Let's move on to underwriting and claims.; Given they are new products, they are going to require some new approaches, and it will evolve over time. For underwriting, you need sound risk selection upfront with no post-claims underwriting. Thus, one should realize that the standard long-term-care risk is by no means equal to a standard life risk.

The underwriter must determine the probability that an elderly person becomes disabled and stays in that state, as opposed to simply surviving. You must distinguish between the normal signs of aging and pathological conditions. There are multiple risk factors to consider—medical, functional, cognitive and even social, which is a completely different risk. The chief underwriter and the pricing actuary must have the same perception of that standard risk and it's very important that they speak to each other.

Profitability relies heavily upon effective claims management. It's important that the claims manager and pricing actuary have the same perception as to what is a valid claim. When I was pricing long-term care and saw some of the claims that came through, I'd have to put loadings onto the premiums, because that was not priced.

I mentioned the claims criteria before. This middle column in Figure 4 about cash versus care is one of the big discussions in the U.K. market. The insurer's duty is to provide care, not just cash. There are arguments for and against cash versus care. Cash can be more convenient; however, it is open to abuse and there is incentive for fraud. You've got less control over the actual claims and it could lead to bad PR.

Figure 4

Risk management

Claims management

Claims criteria

- ADLs:
  - washing
  - dressing
  - feeding
  - toileting
  - mobility
  - transferring
- Mental impairment.

Cash vs Care

- convenient
- open to abuse
- incentive for fraud
- little control of claims
- potentially damaging PR
- cheaper, quicker, simpler market entry
- increased claims control
- complete service offering
- opportunity to add real value
- have to monitor quality
- potentially damaging PR

Controlling Care Costs

- Care Management Program
- cost effective
- claimant friendly
- addresses the individual needs/circumstances …
- if not managed … spiralling costs which leads to premium increases!

19

However, on the care side, you do have increased claims control and you give a complete service offering and real added value. However, you have to monitor it very carefully, or suffer from bad PR. Again, on the care side, you need to be able to control costs or else they could spiral out of control. There must be an effective care management program that is cost-effective and claimant-friendly.

The final part of the control cycle is the experience monitoring function, which is vital to the success of any product line. As I said before, we've had valuable lessons from income protection where monitoring procedures were eventually put in place, but not before suffering severe financial consequences. Some companies actually shut down. Others had to leave the market.

One may think as an industry we would have learned by now. The data collection must be accurate, relevant and robust. It should analyze the key rating factors on a timely and regular basis. There must be a careful interpretation of the results, bringing in all disciplines. Results are then fed back into the pricing and valuation basis. Also, there are things such as monitoring your exposure with respect to guarantees and other key rating factors. If one assumes that the portfolio would be 50 percent guaranteed, it may end up at 80 percent guaranteed. This has reserving and capital implications.

In summary, we have to manage a long-term risk with limited relevant experience that is not going to grow much in the coming years. Any available information that we have requires careful interpretation. I can't stress enough that the integrated

approach is vital, using the control cycle as a model. However, with careful portfolio management, this is a significant and growing opportunity.

To conclude, it is worthwhile writing long-term-care insurance and we've got the ability to do so, but there is a need for caution—I can't stress that enough. However, if we are sensible, we can make long-term-care insurance a viable and profitable product.

MR. SCOTT WELTZ: I'm going to focus on the U.S. side of things, and emphasize the experience-monitoring portion of the control cycle that Sue just mentioned. I will talk about an extensive research effort in which we at Milliman have been involved for the past two to three years, with regard to $1.8 billion in insured claims. I will also discuss our work with long-term-care experience analysis.

Before I get into that, I want to point out that there's more to long-term care than just claims experience, due to monetary things such as policyholder persistency. The industry has slowly but surely convinced itself that lapse rates are not what were once anticipated. The fact that it is a lapse-supported product is an important monitoring issue.

As our liabilities continue to grow, investment income and the assets backing them increase in importance, so make sure that's in line with pricing assumptions. Finally, while expenses are not a huge piece of the premium puzzle, they are important for start-up operations as they get involved in the business. Again, the focus here is on morbidity.

The reason long-term care is so challenging at this point is because the product is still in its infancy. Most companies don't have more than five to 10 years of good claims experience. While that may seem like a reasonable amount of experience, remember that we're talking about insureds who are typically in their 60s or 70s, with whom real claims start happening in their 80s and 90s. So, with experience monitoring of long-term care, what's important is how you project whatever you see during your experience period.

Credibility is also an issue. You'll always run across that. Even with our claims database, there were certain segments in which we weren't able to fill in the gaps with real insured experience. The main thing you need to keep in mind is that credibility in and of itself depends on a prior best estimate, so be very careful in what you consider to be your best estimate. If you see all your pricing assumptions drop by 200 percent, then you have a piece of information missing. Don’t go back to that prior pricing estimate as the current best estimate. It needs a little tweaking.

The changing dynamics of the industry also make this a challenge. The product we sell today is nowhere near what we sold 10 years ago. Benefit triggers have changed and underwriting is much better. This means you need to segment your

data appropriately to make sure you're consistently comparing things on an apples-to-apples basis. Also, the long-tail risk makes it more of a challenge.

To address some of these issues, try to gather as much data as you possible can. Obviously, insured experience is the most valuable data for this purpose, but population experience, population studies, the National Long-Term Care Survey, National Nursing Home surveys, et cetera, can help fill in some of the gaps I mentioned before. This is particularly necessary at the oldest stages because there still isn't much insured experience beyond age 90 or 95. It's important to know what's happening out there, especially considering the lapse rates we deal with today.

One can always use outside resources such as consultants and reinsurers. Once you do have all your data together, create as comprehensive of a warehouse as possible. Companies are now starting to track all their policyholder data. This starts from application and goes all the way through the claims and the lapse of the policy so that they can link those together and determine what's a good risk and what is a bad one. Finally, make sure to analyze your data, which is the point of this presentation.

To do that, I will go through a case study of a hypothetical block. I can't emphasize enough that this is hypothetical. Please don't use any information you hear for pricing purposes.

For this hypothetical case study, assume that everything came out exactly as expected. Regarding morbidity, let's assume that we just completed both incidence and length-of-stay studies, and now we're going to look at our incurred claims. This is an important step that people don't always consider. The claim reserve will have a significant impact on your incurred claims study, particularly with your recent claims. In this case, the incurred claim is heavily dominated by that reserve.

It's essential to make sure that your claims runoff pattern is consistent with what is in that claim reserve estimate. Otherwise, this may skew your view of what's happening.

Now for the 10-step plan. Step one is to throw away your expected selection factors. This is easiest to explain with the following example of two scenarios. In the first, you expect selection to wear off over a seven-year period due to underwriting purposes, but actuary number two might think it would last a little longer, maybe 10 years out. This won't affect the pricing of the premium; it will be one-half of a point at most, and probably not even that, because what really matters is what you're doing on an ultimate basis.

However, for experience monitoring purposes, the selection factors can have a drastic impact. What if scenario one was your actual experience and what if scenario two was your expected selection factor that's buried in your monitoring?

You may come to the conclusion that your experience is far worse than you ever expected. But I look at this and I say that it looks like you pretty much hit it on the mark. You just didn't estimate your selection pattern appropriately.

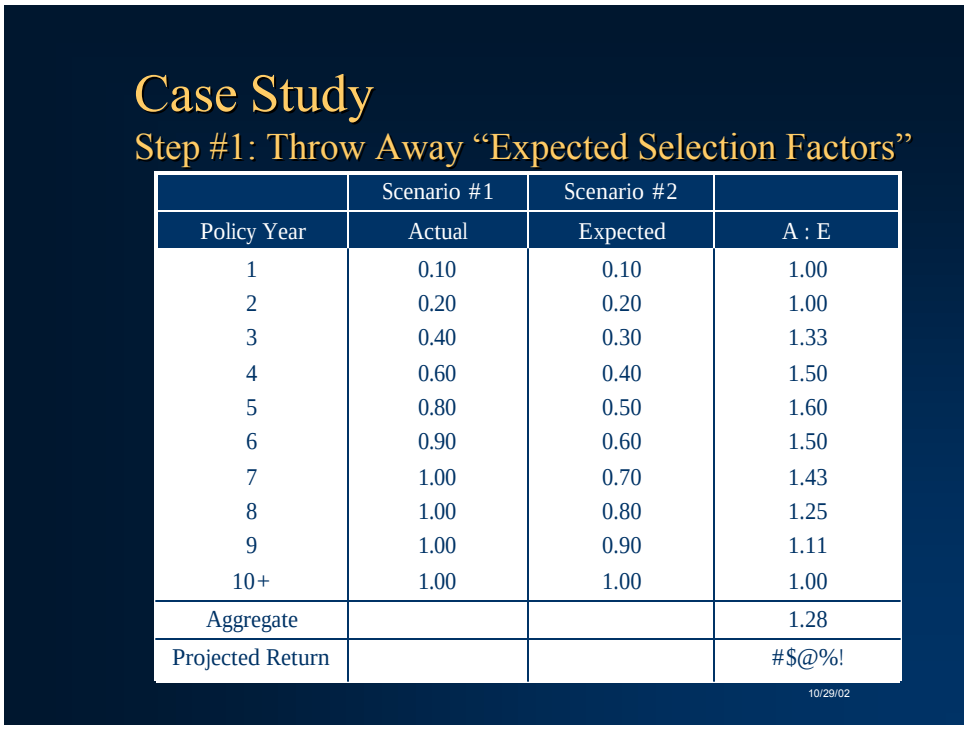
However, if you left that buried in there, all of a sudden, you might say that since experience is 28 percent above the expected amount, this product is terrible and the company should get rid of it. That may not be the conclusion you want to make there. To deal with that, I simply recommend getting rid of your selection factors when you do such an analysis.

The next thing to do is to review your key risk groups. I have not included all the possible risk groups, but here are a few of the key ones that we come across in our analysis. Note that everything gets to a .7, because now the selection factors are removed (Figures 5 and 6).

Figure 5

Policy Year	Scenario #1	Scenario #2
1	0.10	0.10
2	0.20	0.20
3	0.40	0.30
4	0.60	0.40
5	0.80	0.50
6	0.90	0.60
7	1.00	0.70
8	1.00	0.80
9	1.00	0.90
10+	1.00	1.00

Figure 6



Issue age is important, obviously, due to the steep age cost curve of long-term care. Gender is important due to the unisex pricing that's prevalent in the market today and the subsidies that occur between males and females. Marital status is also important. I recommend finding out if a marital discount appears to be appropriate or not. It's also important to vary things by underwriting guidelines. Since underwriting has improved dramatically over the years, you'll probably want to segment your data into those "loose" and "tight" buckets (Figures 7 and 8).

Figure 7

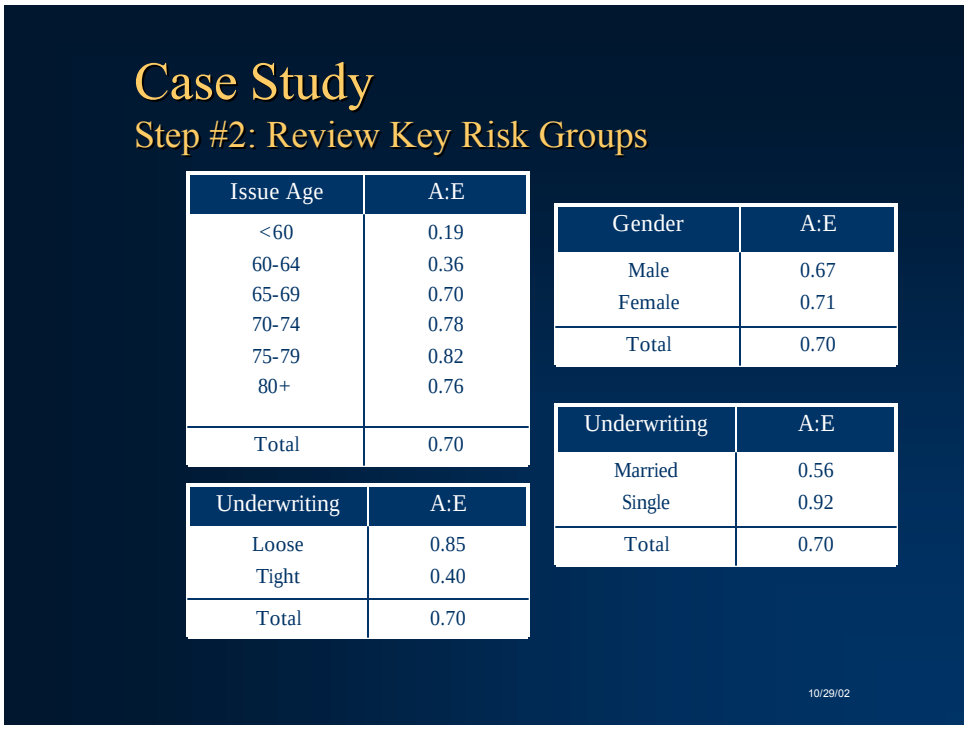
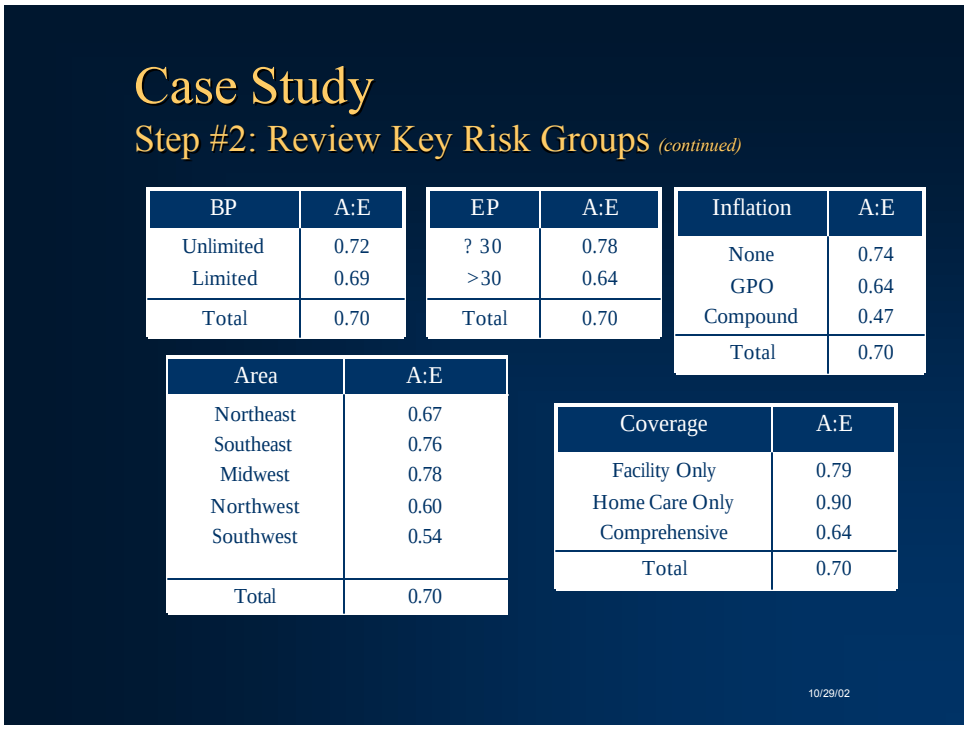


Figure 8



There are also benefit and elimination periods. Often these will be the worst risks. Select the richest plan designs, be they longer benefit periods, shorter elimination periods, etc. I'll point out in Figure 8, I have the unlimited benefit periods at .72 and the limited benefit periods at .69. They are virtually the same.

An example later in the presentation emphasizes the need to segment your data. It may not produce the result that you're seeing right here. Coverage type also plays into this. Facility-only plans sometimes experience claim costs on an absolute dollar basis greater than what companies see on a comprehensive plan. That often happens because of the geographic area in which it was sold and the utilization patterns associated with it. It is something to look for if you sell both types of policies.

Here's the fun part if you're an actuary. Start drilling. Try to determine the key variables and what makes this business tick. Ideally, you'd want to review all possible combinations, but, obviously, that's not always possible. To demonstrate the need to dig further, I put together this example. Males and females in the previous slide aggregated to .67 and .71, hovering around that .7 estimate again. Unlimited benefit periods are at .72 in total. Limited is at .69.

So, at first blush, you look at that and you think that everything's coming out just as expected and that the curves don't need to be adjusted. However, if you dig a little deeper and you look at each individual age band by gender, you note that unlimited benefit periods are 20–30 points higher than limited benefit periods in each segment. They aggregated to be similar only due to the issue age distribution. There are more limited benefit periods at the older ages and less at the younger ages due to counteroffers, et cetera. I can't emphasize enough how important this is, because had you not done this, you might have come to a totally different conclusion. Here's where you can really add value to the company.

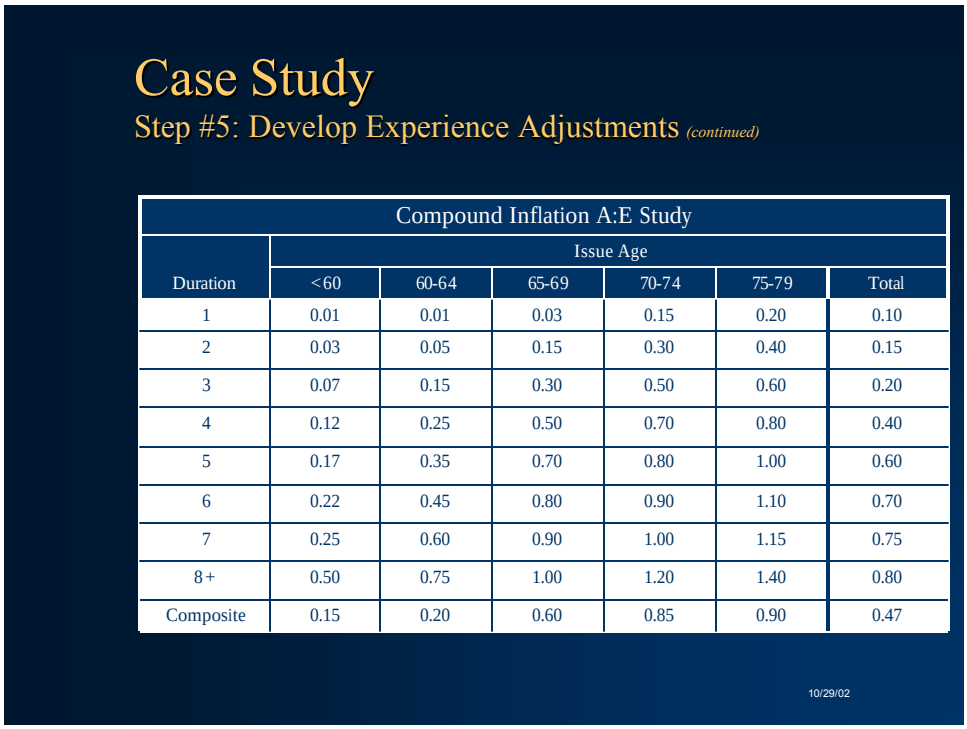
The next step is to focus your efforts. Like I said, you can't possibly look at every combination and every cut of data. You just wouldn't have anything left. What you want to do is talk with the other departments of your company to determine what they think is important as well, based on what you're finding on a preliminary basis. Often they'll have insights that will help you determine where you want to dig and where you don't want to dig.

Most often it comes down to these two main things: your largest areas of exposures and what you sell the most. Obviously, you're going to dig in more there and then into your current sales mix. Some companies in the past just sold facility-only policies. Now, they sell all comprehensive ones because that appeared to be the better risk. You're definitely going to want to cut your data, even though you might not have a lot of claims experience on the comprehensive side. This is to get a feel for the direction in which things are going to ensure you are making the right decisions. In addition, that will impact your projections drastically if you do have different curves for those.

In this case, let's assume the company wants to look at everything except geographic area, based on those two items I just mentioned. A lot of companies aren't ready to error rate this stuff yet and it may not be a good decision based on the long-tail risk associated with it. Often, the most companies will do is error rate specific places where they know their experience will be bad, but not recognize it on the other side because they know they had margin in their morbidity basis.

Now let's fast forward. Assume that we've developed experience adjustments for almost every type, except we hadn't looked at the inflation option yet, and to do this we'll also look at it by issue age. This is a similar pattern to what was in Figure 8. The youngest ages are coming out at 15 percent of expected and at 77 you're also at 90 percent. That looks like great news, because, obviously, you're going to sell more compound inflation at the younger ages, who need this stuff more. However, that may not be the case after looking at it a bit more (Figure 9).

Figure 9



Compound Inflation A:E Study						
	Issue Age					
Duration	<60	60-64	65-69	70-74	75-79	Total
1	0.01	0.01	0.03	0.15	0.20	0.10
2	0.03	0.05	0.15	0.30	0.40	0.15
3	0.07	0.15	0.30	0.50	0.60	0.20
4	0.12	0.25	0.50	0.70	0.80	0.40
5	0.17	0.35	0.70	0.80	1.00	0.60
6	0.22	0.45	0.80	0.90	1.10	0.70
7	0.25	0.60	0.90	1.00	1.15	0.75
8+	0.50	0.75	1.00	1.20	1.40	0.80
Composite	0.15	0.20	0.60	0.85	0.90	0.47

The real key here, like I said, is how you project your experience. It's easy to develop A to Es once you know how you're going to cut the data. You simply take your actual and your expected, divide it out and you're done. But now how you project is key, because you're relying on your attained-age cost curve as you do that projection and you may want to grade some of those factors that are a little higher or some that are really high. You might want to reduce those, so it takes a little bit more analysis (Figures 10–14).

Figure 10

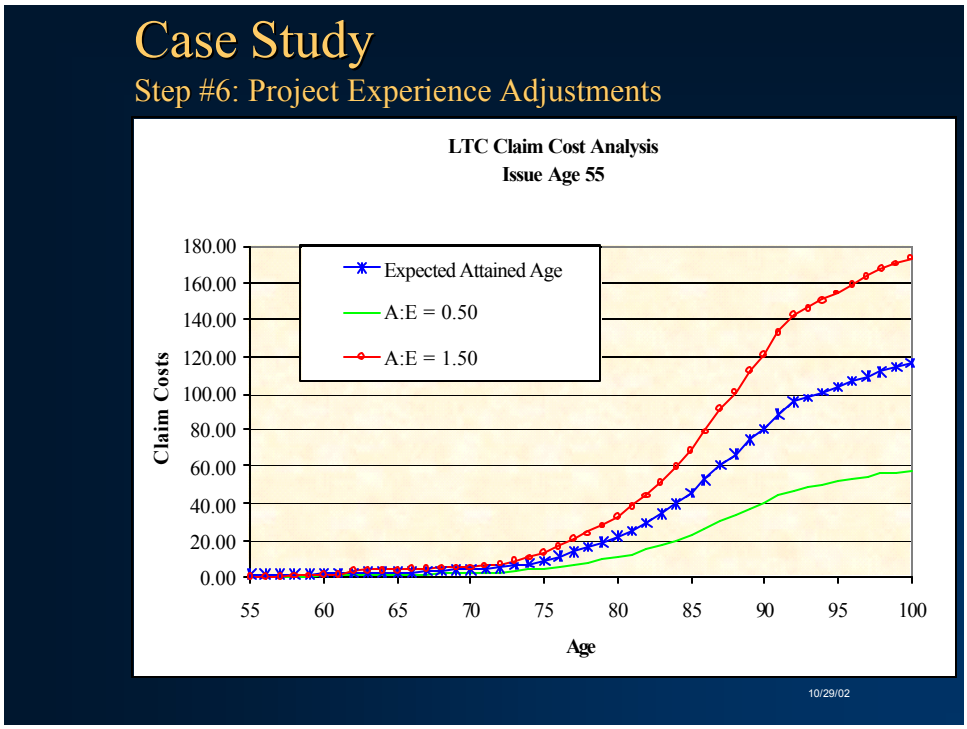


Figure 11

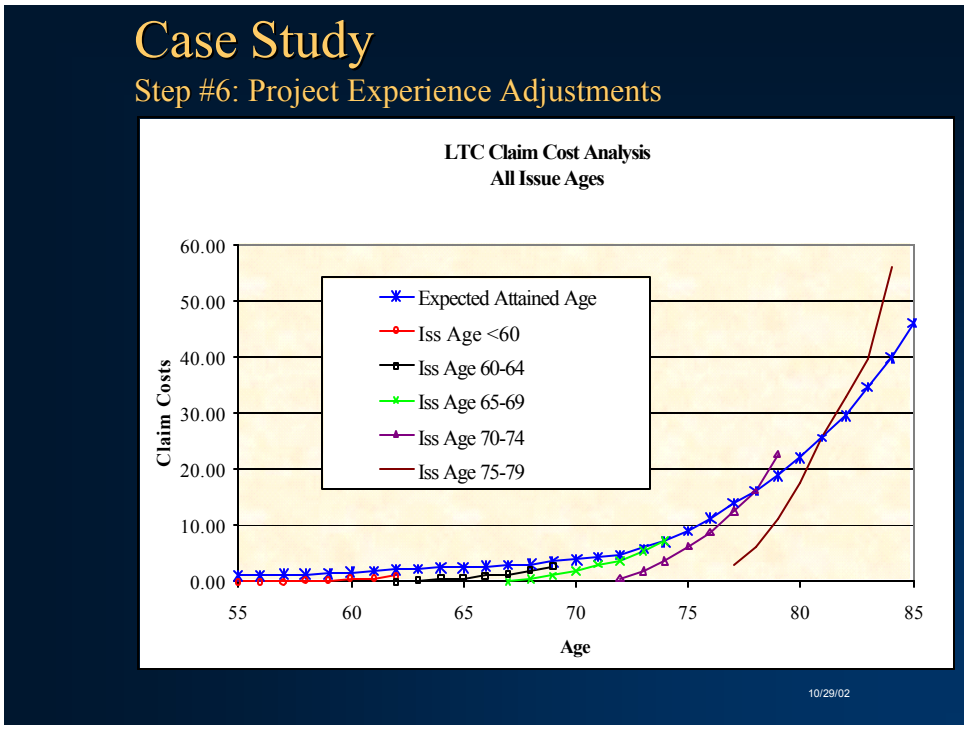


Figure 12

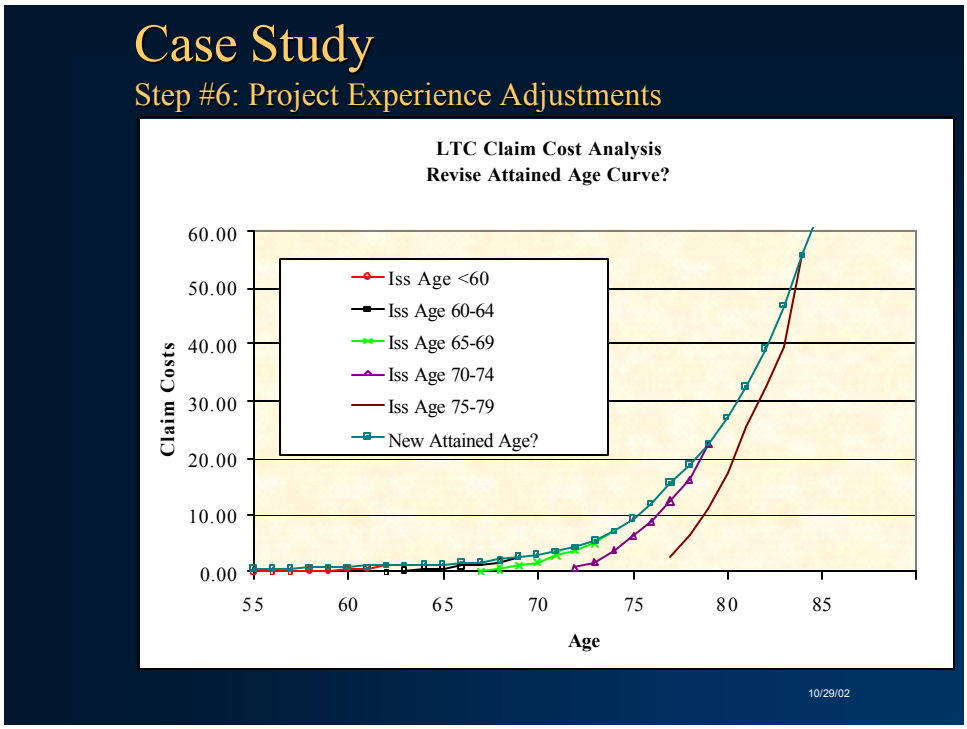


Figure 13

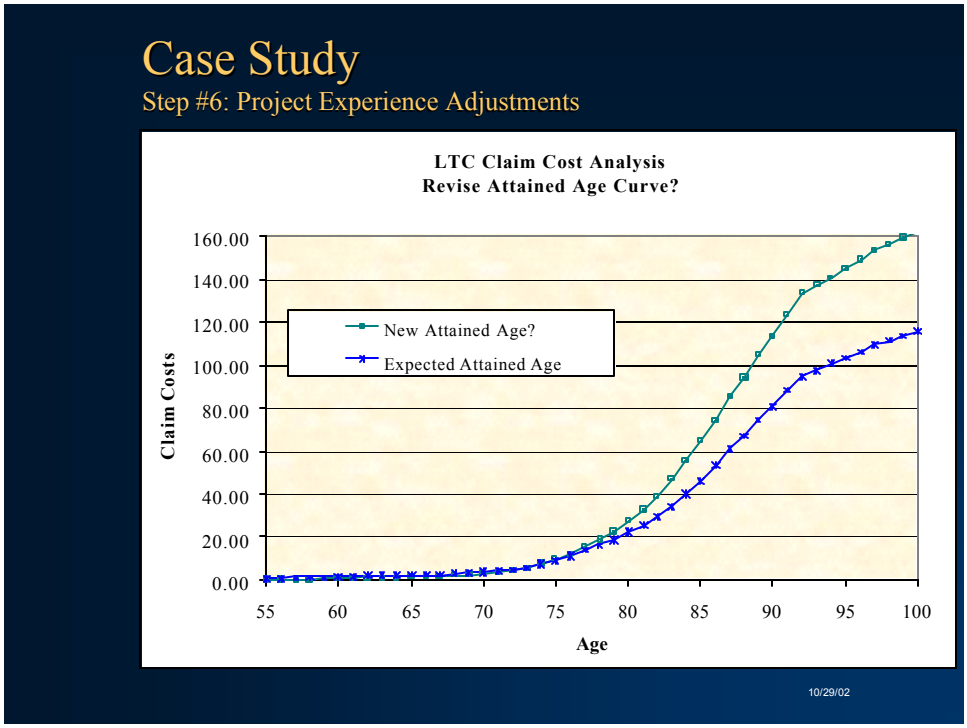
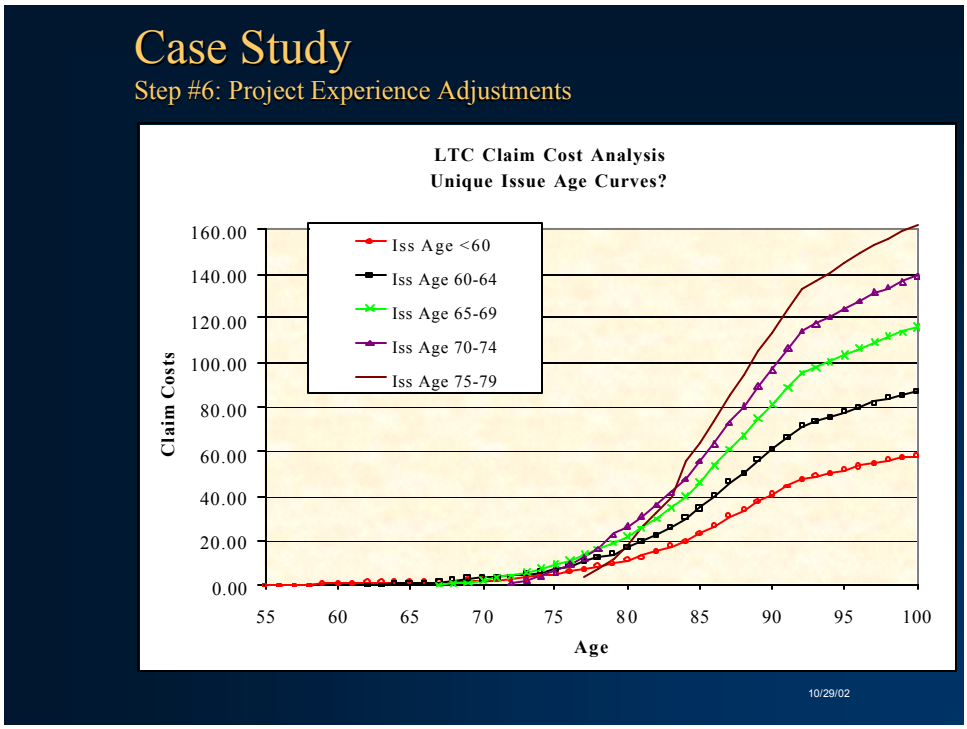


Figure 14



The first draft I have is for the under-60-year-old bucket. Note that the youngest age grades to an ultimate of 50 percent, whereas, the oldest stages go to 140 percent.

The middle blue line is the expected attained age that you had in your pricing estimates. The lowest line is 50 percent of that expected curve, which is what you would do if you believed that you were going to maintain that good experience for the life of the policy. The top line is 150 percent. The reason I put that in there is because I want you to look at the experience period from 55–65. I don't know about you, but I can't tell which one's higher.

When doing the experience analysis, while good A to Es are definitely something you want to see, you have to keep in mind the magnitude of the claim costs as well. You didn't expect many claim costs at that point in the first place, so to say that this experience is reflective of what's going to happen 30 years from now may not necessarily be a good decision.

Then what do you do to address that? The best thing we have available right now is the various issue age cuts. You have the attained age curve and where the experience landed by issue age. The attained age curve may not be that inappropriate after all. What you may want to do is just grade that youngest age up to the ultimate later on. I've done that right here.

The problem is that the new attained-age curve is that much steeper, and if you do any gross premium valuations, you're going to quickly realize you're pretty inadequate. In addition, it's quite difficult to get a competitive premium at those youngest ages going with that estimate right there.

So then what do you do? You might say the issue age curve is different for each and every issue age Maybe the younger the insured, the better the insured is on an ultimate basis. It's something to consider.

Here I held the ultimate A to E factor constant for the duration of the contract. This is an extreme version of what is realistic. You might believe that things are different by issue age due to the adverse selection that occurs the older a person gets. Note, for example, the underwriting decline rates for an 80-year-old versus those for a 50-year-old. These are quite different risk groups. Potentially, that could last for some time. It should diminish somewhat, but it will probably last.

There are other reasons to believe that the younger ages may be a little lower.. If you subscribe to any of the morbidity improvement theories out there, if any of the medical advances are going to help anyone, it will be the youngest insureds, not the oldest, because they have a longer time frame to benefit from such improvements. That's another reason why you might want to vary it somewhat. I think a combination of that steeper attained-age curve and these varying issue age curves is the answer, but that's for each company to decide for itself.

FROM THE FLOOR: Is the curve indicating that a 65-year-old in 30 years is a better risk than a 95-year-old who went through underwriting right now?

MR. WELTZ: Yes.

FROM THE FLOOR: That's not contrary to the value of the underwriting?

MR. WELTZ: No. I don't believe it should be that far away, but I do believe it is difficult to underwrite away all of the risk at those upper attained ages. But, certainly, I wouldn't think that claim costs would be one-third of the other at that point.

Once you finalize your assumptions, it's time to do some gross premium valuations financial projections to see where your business is. On a best estimate basis, in this case, let's say that we're at an eight percent return on your in-force block. Many clients would be thrilled if their original premiums were giving them that. What you're trying to look at, though, are the areas where the returns are well above your expected. If you have a significant amount of segments where your returns are well above 20 percent, obviously those are the places you want to exploit. Before you jump to those conclusions, however, it's important to sensitivity-test your results. You'd be surprised what a modest change in your ultimate morbidity level can do to your gross premium valuation. You can go from adequate to

inadequate really fast when you're dealing with billions of dollars of incurred claims on a present value basis.

Management definitely needs to be aware of that. Communicate those findings, show them the key drivers and assumptions, and if they're uncomfortable with anything, adjust the models accordingly.

Once everyone's finally on the same page—and I'm not sure that ever happens—it's time to take action. Mark is going to get into some of these issues a bit more. You can put in an upgrade program to steer your business toward your more profitable areas, manage claims better and implement rate increases. Put out new products and improve underwriting in the right areas.

Finally, step 10 is to simply start all over. This process never ends and is just going to become a bigger and bigger part of the industry as experience basis grows and liabilities become a much more significant portion of companies' financial statements. The companies that do it best will, obviously, come out on top.

MR. DINSMORE: ? I'm going to talk about a survey of different proactive techniques to help the financial viability and profitability of in-force blocks. Most of these techniques are designed to very actively manage the blocks. Some techniques on this list are proven methods that have been employed by large companies and shown better financial results, and some are just emerging possibilities.

Following Scott, I can't emphasize enough that you need to start looking at your block from an experience analysis basis. This means putting resources into it to understand what you're seeing and being able to cut up the business into various pieces to understand where you're having problems and why.

I put these techniques into five different categories, and I'm going to talk about three of them. I will talk about expense management, with which most carriers are very familiar. I will also discuss policy contract management, to which Scott alluded regarding upgrades and convergence. I will also talk about claim management.

Each of these techniques requires its own analytic foundation. The ones that I'm looking at require extensive experience analysis and data mining.

The insurance industry has a very strong history of sales expense management. Everybody knows how small that margin is and how difficult it is to get that down, so that has limited value. However, there's another piece that I have looked at, which is doing things with commissions. Generally, you say commissions are fixed when the product is first sold. They're stable, so one thinks nothing can be done about them. But I've seen companies that are actively engaging in buyback offers. Sometimes they use third parties.

I'm going to give you a few reasons why this is a very valuable thing for companies to do. Number one, agents are generally front-loaded kind of people, so they'll give you a little extra if you're willing to buy back their commissions and give them a bit more. The other reason is that insurance companies should be willing to buy back the commissions at a lower than risk-free rate. This is because they're a perfect, natural hedge against people's problems with claims, since you don't pay commissions while claims are on. When lapses go up on your base policies, you're happy, but when they go up on a buyback commission, you're unhappy. When you bought them back, you're better off. When interest rates go down on your policies, the liability is worse, but that stream of income that you've bought in this buyback is actually better, so there's this nice natural hedge in terms of what you're doing.

One program has targeted a certain number of agents (it has been going on in the industry for a long time, but usually on an ad hoc basis). In this fairly limited experience of people trying this, I was absolutely amazed that about 60 percent of them responded and about 30 percent of them ended up actually doing the conversion and their commissions were bought back.

They're not seeing this as a two percent lapse rate. Most of these people are agents and are not familiar with that kind of lapse rate; they're not expecting that and they're willing to accept a lot less.

What I'm talking about in terms of policy management is another thing that has been thought up by companies that are worried about their lapse rates. The general concept is to try to take advantage of the necessity of living with these low lapse rates. The general concept is going back to your block and reselling with upgrades and convergence.

That has been an effective program to actually improve the revenue and at the same time that you can decrease or manage the claims. I've built programs for different blocks and obtained very good results. It's a very flexible option, because it goes as far as your imagination in terms of how you design products and how you go back to your customer base and sell them.

I cannot emphasize enough that this requires a very strong experience program. Typically, this has been done successfully when one has been able to segment his or her business, identify those segments that would benefit from a program or benefit from a change, come up with a strategy that works very well and has a very good marketing story to get good convergence.

Then, the policyholder or agents are happy with you and you get better results. You can't do that without having a very good grasp on what it costs you to sell, where it costs you, who's using it and why.

One of the companies I dealt with had nursing home and facility coverage, which included alternative living care facility coverage with indemnity payments. We

designed a plan for them to trade some of their daily maximum or other benefits for home-care benefits. We sold it at roughly the same premium at issue age rate and allowed the change for that underwriting. In this particular group, the target was six to seven percent of the policyholders, say 25,000 people.

The first time we tried to convert we got about a 35 percent conversion rate. We went back to policyholders a second time with essentially the same offer. This second time around, we got a 20 percent conversion rate. Since we had no underwriting, there was a significant amount of anti-selection.

Actually, that's very interesting. You have to think about that, whether it's good or bad, because these people were already on the hook for risk. If they were in bad health, there was a good chance that they were coming in at a later date. Our experience to date shows that these people ended up claiming at a much higher rate, but in a much lower severity. In the first year it's about a break-even, and after that it's an improvement over time, because you've stripped out a lot of the very bad health risks.

One of the things that's interesting is that since you all have in-force blocks, that means that there are a lot of people who are sick but haven't claimed. They could claim if they just called your claims department. That's one of the things that we found. This is a little scary. After the anti-selection transient claims dropped in this particular change, they were about 20–30 percent lower than the original block, which was running very poorly just because of the segment that it was in.

Now, this particular program, which is more of an emerging case, is being expanded to other cases. Again, this is based on very detailed experience analysis about why people claim and when. We are expanding the program to other people on different customized offers of various types of home care. This is wider than the 25,000 band. Rather than 7–10 percent, we're implementing it with reduced underwriting requirements. The underwriting depends strongly on a person's original coverage as well as a person's health condition.

This is a very broad offering. We had a hurdle rate of about 10 percent of sales, and we had predicted about 20 percent. Based on the initial response, we expect this to behave like the other program in terms of people's responses and interests. We also expect significant anti-selection, but, again, we expect that this would mean more claims and less severity. That's based on detailed experience analysis of various types of policies in the segments that we're offering and the customized offers we're making.

We expect the original policy to actually have a drop in claims, again, because we're siphoning off some of the worst cases and bringing them to home care. We expect the home care policy for which we're selling an adjunct to have about a 60–65 percent loss ratio with a reasonable amount of pad.

One of the things that has come about through this is we think there's a whole new sales model in this. Since we've been so successful at doing conversions and getting sales, we think that by generalizing this, identifying segments in your population, and understanding why people claim and where, you can design customized products with significantly better-than-average loss ratios, that will manage your claims, and direct sell them to your policyholder base. As a whole, this is how we have focused on significantly reducing the likelihood of future rating actions.

You have to start with, again, very detailed claims experience analysis. The idea is to develop options for increased premium, reduce claims or do both. I like to do both. However, you have to start thinking in terms of what is attractive to policyholders. What do they want?

What's nice about this product is that there are a lot of options in terms of the way people want to behave and to live that are actually less expensive than the worst cases. If you can figure out how to get them there, they'll be thankful and you'll pay them less money. These are customized offers, depending on what individual segments or groups had bought originally. You're basically reselling to existing customers.

There are some promising possibilities based on various experience pieces that I've seen and attractiveness to customers. There are certain segments in which lower elimination periods, if done in the right way, can actually reduce claims. This is claims severity, not claims frequency. There are some places where you can sell increased benefits and have low loss ratios if you go to specific targeted segments.

There's one thing with which I'm not very familiar. Over the past two or three years, five different vendors have come to me with marketing that "guarantees" absolutely wonderful ways that my claims will go down if only I will go through a particular process and work with them.

Now, this is a way to pay for that. Sometimes I think that we ought to try this because we've got billions of dollars of future claims, and spending a few hundred thousand dollars now to experiment with what works seems like a good idea. Sit down and do a calculation on future claims costs for $20–100 million worth of premiums over the next 30 or 40 years. Then add in the possibility that you are successful and start selling more and more of this. I want to encourage the industry that although they are vendors, and there is probably a 5–10 percent chance that they'll work, there is an 80–90 percent chance that you'll learn something. And if you learn something that actually reduces claims costs by five percent, you're throwing money in the bank again and again and again.

One last thing that is fairly common is a claims management program. I personally haven't done nearly as much of this. Generally, around budget time, when your managers ask how can they possibly make this year's net income goals, the

response can be to figure out a way to pay less claims, because you're not going to make it in new sales this year.

One of the things in which I hadn't been involved very much, but that the claims manager worked on very strongly, is a very high touch home-care claims management situation with early intervention. The vendors that went in for this early intervention actually negotiated price with the provider of choice and we got fairly good data that they were getting 15 percent price reductions. They actually went in.

It took many years to get to this point where the provider evaluated the environment, condition and safety of the area. I believe, based on the experience, that it actually did help. However, I don't have strong experience studies to verify it. Only the end result experience data leads me to believe that it's true, especially when I compare it to blocks that did not have such results.

Again, the evidence shows that the outcomes are improved. Basically, they improved by higher recovery and lower institutionalization, and in some targeted segments you significantly reduce claims costs. In some very interesting segments of the population, it did reduce claim costs to get people in there for early intervention. That was what I mentioned earlier about having, in some cases, a good zero-day option actually reduce claim costs.

Again, I will mention wellness options with vendors. One of the things that I've talked about before is selling to someone in his or her sick bed. A lot of carriers have done this for an alternative care plan, but you can actually sell something to somebody in that situation to expand his or her options. It's a way to get extra revenue. Obviously, the plan has to be designed properly, and you have to be very careful in terms of how you sell it and the way you talk to people. This includes maximum-day extensions and other home-care options that they didn't have before.

There's another thing. I'm sure most carriers have been approached by various people that say there are discount networks that haven't been there yet; that people just want to build them. But I think that if you look at the long-term, it can very likely get us an extra reduction in claims, which will be very high if they follow projections over the next 20 years.

FROM THE FLOOR: This is a question for Mark. In some of those upgrade programs, I am curious as to your comments on any challenges. Actually, was there a filing challenge in getting states to go along with what you wanted to do?

MR. DINSMORE: There's a filing issue. Generally, what we've relied on—and this is a question of positioning—is the fact there has been a consumer push for developing program upgrades to more modern policies. So, when talking to regulators, and I've spoken very intensively to a couple of them, they are happy when a company tries its best to give people upgrades on offers.

Whenever I design a product I think about if my mom is going to like it, would I like it and see how it looks. When it is first designed, suitability issues come up very strongly. I remember going over this for a couple hours with one regulator. The whole issue of suitability was very easily defended with every case that he showed me, except for one case in which we were required to offer compound interest and somebody took it against what I would consider advice. So, generally, I've gotten a pretty positive response.

GARY CORILIS: I have a question for Sue. I'd like the other two to comment, also. Sue, you talked about the U.K., and the experience there of about 35,000 insureds. It's not too dissimilar from Canada. The curves are different, as they are improving in Canada, but not in the U.K.. Some of the issues seem to be the same, such as a socialist government and similar demographics, cradle-to-the-grave expectation and national budget problems. Why do you think that things have gone differently?

Please think about that while I take your point about the definition drift and ask Scott to comment on whether anything was done with this in the Milliman and Robertson (M&R) model. Mark, I assume you're trying to move the definition drift to be more favorable. Can you comment on anything that you might have done or thought about relative to making definition drift more favorable to the company?

MS. ELLIOT: It has to do with the wider financial services industry in the U.K. Also, there is a considerable amount of upheaval, with a lot of mergers and acquisitions. Companies just don't have the money to be spending on non-core products. IFAs aren't interested in selling it because they are afraid of a potential misselling scandal, and we've seen quite a few with the equitable pensions.

People are afraid and they just don't have the money, so that's why the sales in the U.K. are not increasing. The companies aren't putting the effort into it. It has nothing to do with that overall culture. People are still aware it's a need, but the companies aren't pushing it.

MR. WELTZ: Okay, with respect to definition drift, first, I want to make sure I'm addressing your concern. You're just considering the changes in policy designs over the years and how to account for that. What we did was segment the data by major categories. We segmented things by such triggers as medical necessity versus two of six, versus three of six ADL triggers.

Also, on facility-only coverage versus home care only, versus comprehensive coverage, we tried to look at those things differently. Some interesting things did come up. For example, on the benefit triggers, we didn't expect to see that much of a difference in utilization going from a medical necessity to a two of six trigger. This was due to the involuntary nature, to some extent, of a nursing home care claim. However, it did appear to be dramatically different.

We do not fully reflect that in our guidelines simply because we believe, to some extent, those same insureds who bought a medical necessity plan 10 years ago are now the ones buying a two of six plan, so it may not be appropriate to fully reflect that. In addition, there is a much earlier duration experience with the newer stuff, so, to some extent, we gave that less credibility as well. Those are some of the things that we were doing to address these issues.

MR. DINSMORE: For definition drift, just so I understand, are you talking about them as contracts that are changing or after the contract has been written, in terms of the way claims are interpreted and as a pushback?

FROM THE FLOOR: I thought that Sue said that definition drift pays for claims you might not have expected to pay. So You were talking about claims management changes.

MR. DINSMORE: Yes. I've seen a recognition because expectations of policyholders are changing. For example, alternative living care facilities weren't a big issue 15 years ago. They're certainly a big issue now and there are a lot of contracts out there with those features.

Originally, people were selling a minimum three-day hospital stay requirement. Generally, for the political ease of doing business, those types of changes have floated through and have been allowed to go through.

In this case, one has just eaten the difference. Over the last few years, we've viewed that as an opportunity. This is because they represent strong desires on the part of the policyholders to have upgrades in coverage, and we're basically trading that desire for them coming to new terms with us in the existing policy. So, to a great extent, one of the opportunities is the fact that there's been drift in coverage and drift with what's out there to be able to actively manage your claims and get a change in your risk profile.